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Preliminary Report on Sand-streaming in Agadez and Tahoua Departments, Republic of Niger.

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Since November, 1973 dust clouds and sand streams are seen over large areas of the ERTS imagery of the Agadez and Tahoua Departments (states) of northwestern Niger. In December and January images the diffuse clouds seem to have disappeared, but long streams of sand have become visible. The dimensions and orientation of the streams are approximately 100 x 3 km, lying EES-WWN. The winds forming the streams must have a similar orientation.

Other sand streams have been seen by us in ERTS, mainly to leeward of scarps in areas of full desert. We have also reported long, broad sand banding in the Liptako-Gourma region. These bands are not the same in dimension or orientation as the new streams, nor have we observed the process of sand stream formation previously.

The new sand streams are quite linear, while sand-dunes are sinesoidal at a scale of 2 km and curvilinear at 20-100 km. The existing sand-dune orientation in the region of NW Niger is generally NNW-SSW. These older dunes, while still active, have a sinuous pattern, interdunal ponding and vegetation, and some tree growth on top of the dunes (Acacia spp.). The new dunes or sand streams now being formed are covering the old pattern where the old and new patterns intersect.

An enormous amount of sand must be moving in NW Niger. There is a strong possibility that the depth of sand accumulation may be sufficient to bury seeds, vegetation and surface water accumulations to the extent that very little forage will be available in this area during the coming rainy season.

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